



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 1, 2019

Dylan Stankus
ERM-West Inc
1218 3rd Avenue, Suite 1412
Seattle, WA 98101

Reference: Ecology/Univar USA Agreed Order No. DE 5988 – Seattle, Washington

Subject: **Ecology Comments – Groundwater Monitoring Well Installation Plan**

Dear Dylan:

The **Groundwater Monitoring Well Installation Plan** prepared by ERM dated February 22, 2019, and received by Ecology on February 22, 2019, is **not approved**.

The well installation plan cannot be approved because the well construction specifications do not meet the Minimum Standards for the Construction and Maintenance of Wells Washington Administrative Code (WAC) 173-160 as follows:

- WAC 173-160-451(2) (d) states that, “*Direct push wells shall not be constructed through more than one water bearing formation and the seal shall be from the top of the sand pack to the land surface.*” Univar USA has historically (and within this plan) defined two water bearing zones at the Site, a “shallow” and a “deep”. As currently specified in the plan, the direct push well is designed to withdraw water from the “deep” aquifer and would thus penetrate two water bearing zones. This is in violation of the WAC.
- WAC 173-160-451(2)(d) also states that, “*Direct push wells shall not be greater than thirty feet in depth unless a variance is obtained.*” Page 3, Section 3.2 states that, “*It is anticipated that the total depth of the bore hole will be approximately 44 feet below the ground surface.*” Installing a direct push well in excess of 30 feet in depth, without a variance, would be in violation of the WAC. Because other drilling technologies exist that are capable of meeting the Well Drilling WAC, I will recommend to the Ecology Well Drilling Coordinator that a variance not be granted.

I recommend that ERM consider using a different drilling technology to install the well.

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I would also like to make the following comments pertaining to the Plan:

1. Text in the plan refers to "Attachments" but are entitled as Appendices.
2. Page 4, Sections 4 and 5, "Survey" and "Monitoring and Reporting" needs to include plans for submitting the survey and analytical data in accordance with Agreed Order 5988 Section (VIII) subsection (G). Subsection (G) of the order states in pertinent part that, "*Pursuant to WAC 173-340-840(5), all sampling data be submitted in both printed and electronic formats in accordance with Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent procedures specified by Ecology for data submittal.*" TCP Policy 840 requires that the analytical and supporting data needs to be, loaded into Ecology's Environmental Information Management (EIM) database in accordance with Toxics Cleanup Program Policy 840 (copy attached).
3. Univar should make note that there has yet to be any well information or analytical data for this site uploaded to the Ecology EIM data base. I am not sure why this has fallen through the cracks but, uploading of the well information and analytical data to the Ecology EIM is needed and would fulfill the requirements of the Agreed Order.
4. Finally, in accordance with the Agreed Order Section (VIII)(G), Ecology would like to request that Univar notify Ecology at least seven (7) days prior to the well construction to allow an Ecology representative to be on site.

Thank you for your work at this site. Ecology very much appreciates Univar's attention to better defining the extent of groundwater contamination at the site.

If you have any questions or would like to discuss these comments, please contact me at (509) 575-2803.

Sincerely,



Thomas L. Mackie, LHG
Hydrogeologist - Site Manager
Hazardous Waste and Toxics Reduction Program
Central Regional Office
Washington State Department of Ecology

cc: Michelle Staybrook, Univar USA
Noel Philip, Ecology Well Construction Coordinator NWRO
Kristin Daves, Ecology NWRO